

The Very Long form of the Periodic Table

(Werner periodic table)

1	2	3															4	5	6	7	8	9	10	11	12	13	14	15	16	17	18												
1 H Hydrogen gm 1.00794																													2 He Helium g 4.002602														
3 Li Lithium gm 6.941	4 Be Beryllium 9.012182																												5 B Boron gm 10.811	6 C Carbon g 12.0107	7 N Nitrogen g 14.00674	8 O Oxygen g 15.9994	9 F Fluorine 18.9984032	10 Ne Neon gm 20.1797									
11 Na Sodium 22.989770	12 Mg Magnesium 24.3050																												13 Al Aluminum 26.981538	14 Si Silicon 28.0855	15 P Phosphorus 30.973761	16 S Sulfur g 32.066	17 Cl Chlorine 35.4527	18 Ar Argon g 39.948									
19 K Potassium g 39.0983	20 Ca Calcium g 40.078	21 Sc Scandium 44.955910																											22 Ti Titanium 47.867	23 V Vanadium 50.9415	24 Cr Chromium 51.9961	25 Mn Manganese 54.938049	26 Fe Iron 55.845	27 Co Cobalt 58.933200	28 Ni Nickel 58.6934	29 Cu Copper 63.546	30 Zn Zinc 65.39	31 Ga Gallium 69.723	32 Ge Germanium 72.61	33 As Arsenic 74.92160	34 Se Selenium 78.96	35 Br Bromine 79.904	36 Kr Krypton gm 83.80
37 Rb Rubidium g 85.4678	38 Sr Strontium g 87.62	39 Y Yttrium 88.90585																											40 Zr Zirconium g 91.224	41 Nb Niobium 92.90638	42 Mo Molybdenum 95.94	43 Tc Technetium [98]	44 Ru Ruthenium g 101.07	45 Rh Rhodium 102.90550	46 Pd Palladium g 106.42	47 Ag Silver g 107.8682	48 Cd Cadmium g 112.411	49 In Indium 114.818	50 Sn Tin g 118.710	51 Sb Antimony g 121.760	52 Te Tellurium g 127.60	53 I Iodine 126.90447	54 Xe Xenon gm 131.29
55 Cs Cesium 132.90545	56 Ba Barium 137.327	57 La Lanthanum g 138.9055	58 Ce Cerium g 140.116	59 Pr Praseodymium 140.90765	60 Nd Neodymium g 144.24	61 Pm Promethium [145]	62 Sm Samarium g 150.36	63 Eu Europium g 151.964	64 Gd Gadolinium g 157.25	65 Tb Terbium 158.92534	66 Dy Dysprosium g 162.50	67 Ho Holmium 164.93032	68 Er Erbium g 167.26	69 Tm Thulium 168.93421	70 Yb Ytterbium 173.04	71 Lu Lutetium 174.967	72 Hf Hafnium 178.49	73 Ta Tantalum 180.9479	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium g 190.23	77 Ir Iridium 192.217	78 Pt Platinum 195.078	79 Au Gold 196.96655	80 Hg Mercury 200.59	81 Tl Thallium 204.383	82 Pb Lead g 207.2	83 Bi Bismuth 208.98038	84 Po Polonium [209]	85 At Astatine [210]	86 Rn Radon [222]												
87 Fr Francium [223]	88 Ra Radium [226]	89 Ac Actinium [227]	90 Th Thorium g 232.0381	91 Pa Protactinium 231.03588	92 U Uranium gm 238.0289	93 Np Neptunium [237]	94 Pu Plutonium [244]	95 Am Americium [243]	96 Cm Curium [247]	97 Bk Berkelium [247]	98 Cf Californium [251]	99 Es Einsteinium [252]	100 Fm Fermium [257]	101 Md Mendelevium [258]	102 No Nobelium [259]	103 Lr Lawrencium [262]	104 Rf Rutherfordium [261]	105 Db Dubnium [262]	106 Sg Seaborgium [263]	107 Bh Bohrium [262]	108 Hs Hassium [265]	109 Mt Meitnerium [266]	110 Uu Ununium Not named [269]	111 Uuh Ununium Not named [272]	112 Uub Unbium Not named [277]																		
s ¹	s ²	s ² d ¹	s ² f ²	s ² f ³	s ² f ⁴	s ² f ⁵	s ² f ⁶	s ² f ⁷	s ² f ⁸	s ² f ⁹	s ² f ¹⁰	s ² f ¹¹	s ² f ¹²	s ² f ¹³	s ² f ¹⁴	s ² f ¹⁴ d ¹	s ² d ²	s ² d ³	s ² d ⁴	s ² d ⁵	s ² d ⁶	s ² d ⁷	s ² d ⁸	s ² d ⁹	s ² d ¹⁰	s ² p ¹	s ² p ²	s ² p ³	s ² p ⁴	s ² p ⁵	s ² or s ² p ⁶												

The very long form of the periodic table shows the lanthanides and actinides inside the body of the periodic table. The numbers above the table are the conventional group designations. The notations along the bottom of the table are nominal abbreviated electron configurations. For specific elements, the experimental configurations may differ slightly from the generic ones above. See the electron configuration periodic table for the actual ground state configurations.

To show this table on a normal sheet of paper requires that the type font be reduced to 3-point. So you can see why chemists prefer the long form of the periodic table with the lanthanides and actinides placed below.

Mazurs (Edward G. Mazurs, Graphic Representations of the Periodic System During One Hundred Years, The University of Alabama Press, 2nd. Edition, 1974) attributes the first use of this type of table to Alfred Werner in 1905.

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